

ART. IX.—*A Revision of the Genus Pultenaea, Part IV.*

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(With Plate XVI.)

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PULTENAEA TRICHOPHYLLA, sp. nov.

Frutex parvus circiter 3 cm. altus, foliis 8-10 mm. longis lineari-lanceolatis tenuibus actuis concavis supra glabris infra molle patenti-villosis trinerviis quasi verticillatis tenues ramulos alioqui exfoliatos terminantibus, petiolis 2-3 mm. longis, stipulis acutis recurvatis 1-2 mm. longis, floribus minimis 2-3 fere celatis inter foliis terminalibus, calyce 2-3 mm. longo, lobis aequilongis acuminatis, bracteolis 1 mm. longis angustatis acutis sub calyce insertis, ovario minute villosa.

A small shrub about 3 cm. high, with leaves 8-10 mm. long, narrow-lanceolate, thin, acute, concave, glabrous above, below invested with long soft hairs, three-nerved, mostly in bundles at the ends of slender, otherwise leafless branchlets about 1 cm. long. Petioles 2-3 mm. long. Stipules pointed, recurved, 1-2 mm. long. Flowers very small, 2-3, almost concealed by the terminal leaf bundles. Calyx 2-3 mm. long, with pointed, equal lobes. Bracteoles narrow-pointed, 1 mm. long, fixed below the calyx. Ovary beset with minute hairs.

Port Lincoln, Sth. Aus. J. E. Browne.

The peculiar arrangement of the leaves, in false whorls at the ends of slender branchlets, which are bare for about 1 cm., and arise from the axils of leaves on the larger branches, and the very small calyx and narrow-pointed bracteoles distinguish it from its allies, *P. trinervis*, J. M. Black, *P. villifera*, Sieber.

In the National Herbarium, Melbourne, among specimens of *P. involocrata*, which species it resembles in general appearance, but from which it differs in not having flowers singly terminal, and in its bracteoles narrow pointed.

PULTENAEA PUBESCENS, sp. nov.

Frutex erectus parvus, ramulis pubescentibus saepe ferrugineis, foliis 4-5 mm. longis angustis recurvatis apicem versus latioribus margine multum involutis supra vix apertis infra minutissime scabris petiolis 1 mm. longis, stipulis longis et recurvatis latioribus confertisque ad apicem ramulorum floribus prope apicem ramulorum pedicellis 1 mm. longis, bracteis nullis, bracteolis angustatis infra calycem affixis, calyce, 4-5 mm. longo lobis acuminatis minute pubescentibus ovario villosa, stylo subulato.

A small, erect shrub, with branchlets much beset with hairlets, and often rusty coloured. Leaves 4-5 mm. long, narrow, recurved, broader at the summit, almost closed above, scabrous below with minute hairs, on petioles of 1 mm. Stipules long and recurved, broader and much crowded at the summits of the branches. Flowers axillary near the ends of branches, on pedicels 1 mm. long. Bracts none. Bracteoles fixed below the base of the calyx, narrow-linear, often leaf-like with reddish, membranous stipules. Calyx 4-5 mm. long, with acuminate lobes about as long as the tube, minutely pubescent. Ovary villous, style subulate.

South Australia: Mt. Gambier, Lake Bonney, E. Wehl; Victoria: Portland, Allitt; Grampians, Wilhelmi.

It is near *P. recurvifolia* H.B.W., but differs in its rusty red appearance, its leafy stipules and larger calyx. From *P. Readeriana*, H.B.W., it differs in the shape of the calyx, the stipulate bracteoles, axillary flowers and recurved leaves. It has been included under *P. villosa*, Willd., but that species has the ovary glabrous except for a tuft of long, white hairs at the top, and has a calyx with upper lobes much falcate as well as having axillary flowers.

PULTENAEA STYPHELIODES, A. Cunn.

G. Don, in Gen. Syst. ii., 124, 1832.

As it appears improbable that the type has been preserved, an attempt is now made to determine the position of the forms about which so much doubt has existed.

The specimens which have been passing for *P. styphelioides* may be separated thus:—

A.

Foliage resembling that of *Sprengelia incarnata*, Smith; leaves alternate, ovate-lanceolate, rigid, reflexed, ending in a pungent mucrone, rather villous beneath when young, but only at the edges in the adult state, concave, often appressed, and thus appearing to clasp the stem, showing distinct secondary venules below. Stipules conspicuous, reddish, subulate, broader and united on upper branches. Flowers almost sessile, axillary, and crowded near the ends of branches.

Bracteoles inserted on the calyx away from the base, lanceolate, leafy, and provided with membranous stipules. Calyx villous, 5-7 mm. long, lobes subulate, and longer than the tube, upper lobes, large and falcate. Ovary glabrous except for a tuft of long white hairs at the summit.

Ilford and Queanbeyan, H. Deane; Tumut, Cooma, Boorman, Bauerlen; Taloo by, R. T. Baker; Cox's River, Maiden and Cambage; Barren Jack, Cheel; Narrabri Dist., G. Burrows; Booroomba, Cambage; Victoria: Hume River, Jephcott; Mitta, Clinton; Futtters Range and Mt. Pleasant. The last-named is a villous form for which Mueller's MS. name was *P. epacridea*,

Frag., F.v.M., IV., 1863. To the same form are referred specimens from Monaro, N.S.W., Bauerlen; Edwards River, Sullivan.

B.

Leaves mostly in threes, lanceolate, concave, villous below, without showing secondary venules, straight, ending in a straight, fine point, spreading, short stalked. Flowers axillary on pedicels 2-4 mm. long, not crowded. Bracteoles at the base of the calyx without stipules.

New South Wales: Hill End, Dr. Lanterer; Trunkey and Orange, Boorman; Mudgee, N. Taylor; Orange, Cambage; West of Blue Mountains, Miss King; Sofala, Cambage, (2748); Specimen from Kew Gardens, collected by Cunningham, "Murray River."

These forms, to include which Bentham extended Don's description, certainly represent two species. With regard to the Kew specimen, kindly lent for inspection, the Asst. Director of that Institution says: "G. Don, in his Gen. Syst. in taking up Cunningham's MS. name (wrongly printed '*Staphyleiodes*'), does not give a more definite locality than "New Holland," and may have drawn up his description from a plant raised from seed sent by Cunningham, of which specimens were not preserved. The type is not in the British Museum."

Don's description reads: "Flowers sessile, solitary, axillary. Leaves ovate, acute, stiff, ending in a pungent mucrone, reflexed, rather villous beneath when young, but only at the edges in the adult state. Habit of *Sprengelia incarnata*, *Staphelia*-like."

There can be little doubt that the "A" specimens conform more to Don's description than those of "B." All the "A" specimens have reflexed alternate leaves, while those of "B" are straight and in threes. Flowers are not nearly sessile in "B" but on pedicels sometimes 4 or even 5 mm. long. It is not probable that such an important character as leaves in threes would have been omitted from Don's description if it were present in the plant; and, again, his reference to *Sprengelia* is easily understood when one looks at the glabrous forms of "A," for although the leaves are not in a true sense clasping, they give that impression when they are appressed, as they often are—e.g., the Cooma, Hume River and Talooby specimens. The name *staphelioides* must, therefore, be retained for all forms of "A," with the amended description as given above. Its position in Sect. *Coclophyllum* is with *P. juniperina* Labill, and *P. costata* H.B.W.

With regard to specimens "B," they stand apart in respect of several important characters, and come under a proposed new species name, "*subternata*."

PULTENAEA STYPHELIOIDES, A. Cunn, var. MUTICA, F.v.M.

Under this name Mueller placed specimens from Mt. Pleasant, N.E. Victoria, which differ from the normal in having leaves not

pungent, and sometimes nearly as broad as long. Also at Chiltern, Williamson.

PULTENAEA SUBTERNATA, sp. nov.

P. styphelioides, A. Cunn., partim.

Frutex parvus, ramulis villosis, foliis 6-9 mm. longis plerumque ternatis ovato-lanceolatis concavis rectis patentibus mucronatis nervis latioribus obscuris supra glabris infra villosis petiolis 1 mm. longis, stipulis parvis subulatis, floribus axillaribus pedicellis 2-4 mm. longis, calyce villosa 5 mm. longo lobis subulatis inferioribus tubo longioribus superioribus falcatis, latioribus, bracteolis linearibus subulatis villosis ad basin calyce affixis, ovario glabra, legumine non viso.

Small shrub with villous branches. Leaves from 6 to 9 mm. long, mostly ternate, ovate-lanceolate, straight, concave, spreading, ending in a sharp, straight point glabrous above, villous below, lateral venules obscure. Petioles 1 mm. long. Stipules small, subulate. Flowers axillary, on pedicels 2-4 mm. long. Calyx villous, 5 mm. long, with subulate lobes; lower lobes longer than the tube, upper ones broader and falcate. Bracteoles linear, subulate, exstipulate, villous, fixed at the base of the calyx. Ovary glabrous, except for a tuft of white hairs at the top. Pod not seen.

New South Wales only. Localities as above.

This species can be included under Section *Euchilus*, on account of its ternate leaves, and as it has not the calyx peculiar to that section, it stands as a connecting link between *Euchilus* and *Coelophyllum*.

It is most nearly related to *P. spinosa* (DC.), H.B.W., from which it differs in not being glabrous, obscure secondary venules, shorter pedicels, and different shaped calyx.

PULTENAEA PROCUMBENS, A. Cunn.

In Field, N.S.W., 347, 1838. = *P. setigera*, A. Cunn., Bth., in Ann. Wien. Mus. ii. 82, 1838, = *P. styphelioides*, A. Cunn.

This species seems to have been founded mainly on its procumbent habit. In Maiden and Betche's "Census of N.S.W. Plants," p. 103, it is stated: "We have erect specimens (*P. procumbens*) in the Herbarium, about 2½ ft. high, collected by Mr. F. Blakey at Bowan Park, near Orange, in November, 1907, which have a very different aspect from the typical *procumbens*, but they differ in no essential characters, and can hardly be separated as a named variety." The Bowan Park specimens are evidently the true *P. styphelioides*. Specimens labelled "*procumbens*" from Mundoora, Mueller; Cooma, Boorman; and Cox's River, Maiden and Betche, all agree with the description of *P. styphelioides* as



P. trichophylla, sp. n.



P. pubescens, sp. n.



P. trinervis, J.M. Black.



var. *mutica*, Ev.M.



P. styphelioides, A. Cunn.



P. subternata sp. n.